

Evaluation Brief EB6

April 11, 2007

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Off-Site Testing of the Prototype 10-Meter Markers: Circle Text

Based on the phase-one formative evaluation of the *Trail of Time*, we expect that, in the absence of interpretative signage, many visitors will have difficulty understanding the purpose of the trail markers embedded in the trail (Gyllenhaal & Perry, 2004). This off-site prototype test was designed to determine what text, encircling the 10-meter markers, is most effective at helping potential visitors understand that the markers are part of a horizontal timeline about the geologic history of the Grand Canyon.

Recommendations:

1. Place the words, *The Trail of Time*, around the top curve of the 10-meter markers (above the date).
2. Place the words, *A Geology Timeline*, around the bottom curve of the 10-meter markers (below the date).
3. All the text should be right-side up (when viewed from the middle of the trail).
4. The text should be all capital letters.
5. Continue testing the Grand Canyon profile at the Rim.

Key Findings:

1. Many respondents had difficulty reading upside-down text.
2. Text with all capitals was easily read by all respondents, even when the markers were placed on the floor.
3. When the term *timeline* was used, all respondents recognized the purpose of the markers. When the word *timeline* was not used, some respondents were confused about the markers' purpose.
4. When the term *geology* was used, almost all respondents recognized the purpose of the timeline. (The only exception was a 4th grader, who could not remember what geology was.)
5. Including the entire phrase, *A Timeline of Grand Canyon Geology*, made the text more difficult to read from a distance, although some respondents expressed a more complete understanding of the purpose of the Trail when it was present.
6. The Rocks-Canyon-Time mantra proved frustrating for most respondents and was judged not effective for use on the 10-meter markers (although it may still be appropriate for use in other parts of the project).
7. The canyon profile produced mixed results. Some respondents noticed and understood it without prompting, others did not notice it at first, and some were confused by it.

Methods:

This test was conducted off-site in the Chicago area. It combined a critical review and user testing with purposively selected respondents. The seven respondents varied in age (4th grade through mature adult), previous experience with the Grand Canyon (no experience to several previous visits), and knowledge of geology (complete novice to amateur paleontologist). In addition to the critical review, there was a total of three hours of contact time with respondents.

The critical review consisted of two evaluators independently reviewing the materials for the incorporation of principles of instructional design and informal learning. The protocol used with respondents included an initial orientation using photos of the Grand Canyon. Respondents were then shown a series of graphics of full-sized prototype 10-meter markers and asked a series of open-ended questions. Four examples are illustrated on page two. Most respondents were also asked to read versions with upside-down text.

References

- Gyllenhaal, E. D., & Perry, D. L. (2004). *Phase one of formative evaluation for the Trail of Time at Grand Canyon National Park*. Unpublished manuscript, University of New Mexico, Albuquerque, NM.
<http://www.selindaresearch.com/TrailOfTimeFormativeFINAL.pdf>

One of the Photographs Used to Orient Respondents to the Trail



Four Examples of 10-meter Markers Used in Prototype Testing

